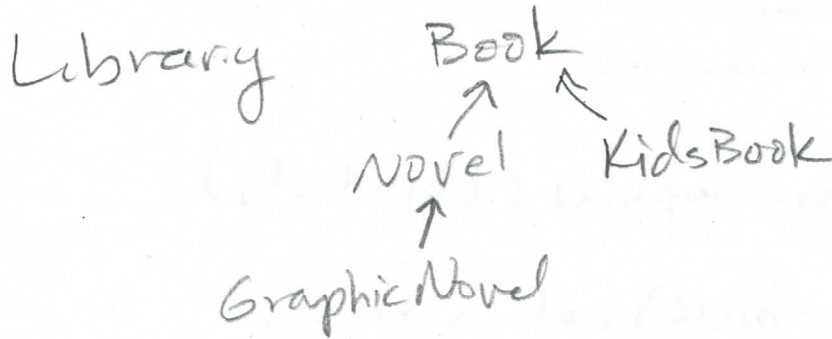


1. Draw a class hierarchy diagram for the following classes, and don't forget the arrows:

GraphicNovel, Novel, KidsBook, Library, Book



2. What two classes do we often override when writing custom classes?

`equals()`, `toString()`

3. All classes in Java inherit from what class?

`Object`

4. Write a .equals method for this class that checks for null and then checks all attributes.

```
public class Bicycle
{
    private int size;
    private String manufacturer;

    //other methods/constructors not shown
}
```

```
public boolean equals (Object obj)
{
    if (obj == null) return false;
    Bicycle other = (Bicycle) obj;
    if (size == other.size && manufacturer.equals(
        other.manufacturer)) return true;
    return false;
}
```